UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
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March 31, 2008

MEMORANDUM

SUBJECT: Response to National Remedy Review Board Recommendations for the State Road 114 Ground Water Plume Superfund Site

FROM: Samuel Coleman, P.E., Director
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U.S. EPA Region 6

TO: David E. Cooper, Chair
National Remedy Review Board

Purpose

This memorandum provides a summary response to the May 30, 2007, advisory recommendations of the National Remedy Review Board (NRRB) regarding the proposed remedial action for the State Road 114 Ground Water Plume Superfund Site.

Response to NRRB Advisory Recommendations

NRRB Comment No. 1: The information presented to the Board did not demonstrate an unacceptable human health or ecological risk that would drive the proposed remedial actions for playa area sludge. Since the bulk of the preferred soil remedy (in excess of $4M out of a $5M remedy) would address the playa area, the Board recommends that the Region further evaluate ecological risk for the playa area sludge and surface water (e.g., phytotoxicity or comparison to an undisturbed playa). The lines of evidence provided by additional ecological risk information may help determine the reason for the lack of vegetation in the playa. If further evaluations find no unacceptable risk due to hazardous constituents in the sludge, the Board recommends using other authorities to restore the playa.

Response to Comment No. 1: A review of the existing lines of evidence do not currently support remedial action for the playa area sludge. A periodic evaluation of the criteria used to determine the ecological risk will be performed to evaluate the continued protectiveness of this decision.

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NRRB Comment No. 2: The Board notes that there are differences in the risk drivers and alternative analyses between the soil hotspots and the playa sludge, yet these two elements of the remedy are combined under the soil alternatives. The Board recommends that these two elements be evaluated individually, especially in light of comment #1 above.

Response to Comment No. 2: The Record of Decision (ROD) is only presenting the remedial alternatives and analysis for the soil hotspot contamination.

NRRB Comment No. 3: As presented to the Board, the Region's preferred alternative would stabilize the sludge in the playa lake area and dispose of it in a trench located elsewhere in the area of contamination (AOC). The Board notes that the sludge may be a RCRA listed hazardous waste under certain circumstances; consequently, land disposal restrictions (LDRs) may be triggered if the sludge is disposed off-site or may be ARAR for on-site actions. The Board recommends that the decision documents clarify why LDRs would not be triggered as an ARAR under the preferred alternative. The Board also recommends that the Region consider a corrective action management unit (CAMU) approach if LDRs would be triggered, or explore the feasibility of off-site recycling of the sludge (i.e., the example described by the Texas CEQ representative from a State lead site).

Response to Comment No. 3: The ROD only addresses the soil hot spot as part of the final remedial strategy for the Site. The on-site soils containing copper and zinc do not appear related to any specific refinery waste or subsequent RCRA waste code and are not considered a hazardous waste for purposes of excavation and disposal.

NRRB Comment No. 4: The Board notes that Alternatives S-2 and S-3 for soil and sludge have treatment costs that differ by a factor of four. If the excavation and treatment for cold processing is $10M higher than for solidification, and there are no prospects for selling the tarry material for recycling, it may be appropriate not to carry Alternative S-3 through for full evaluation in the Region's feasibility study. The Board recommends that the Region obtain cost estimates from additional cold processing vendors and further evaluate potential beneficial reuse of sludge. If the Region proposes Alternative S-2, the Board recommends that the decision documents allow for flexibility concerning the type and amount of amendment used for solidification. For example, using a lower concentration of cement or other pozzolan (e.g., flyash) may reduce costs while achieving the strength goal and protective treatment levels.

Response to Comment No. 4: The ROD only addresses the soil hot spot as part of the final remedial strategy for the Site. The cold processing technology described in Alternative S-3 is not applicable to the contaminated soils containing copper and zinc and was not included in the Proposed Plan.

NRRB Comment No. 5: The review package provides a brief description of source area characterization (e.g., distribution of contaminant mass) and contaminant plume delineation. Uncertainties in site characterization and plume delineation lead to uncertainties in modeling and design alternatives. The Board recognizes the need to provide preliminary details related to remedy design for cost estimating purposes, but given the above uncertainties, the Board recommends that the decision documents allow adequate flexibility during design to provide for the incorporation of new data to refine or optimize the remedy and its evaluation strategy (i.e., modeling and monitoring). In addition, the Board recommends that the decision documents clearly describe the different goals and methods of Alternative GW-3 (i.e., to use ground water extraction to contain the plume while natural processes attenuate the source) and Alternative GW-4 (to use both SVE and pump and treat technology to more aggressively remediate the source area and contaminant plume).

Region 6 Response to Comment No. 5: The ROD indicates that the final number and location of the ground water extraction wells in the selected remedy are subject to revision following further data collection (e.g., sampling) and evaluation (e.g., further refinement of the modeling runs) during the Remedial Design. In addition, the descriptions have been expanded on how each of the ground water alternatives will address the remedial action objectives in the ROD.

NRRB Comment No. 6: The review package indicates that 14 shallow wells and 9 deep wells would be constructed to monitor the impact of the ground water pump-and-treat system. Given the large areal extent of the ground water plume, the Board is concerned that this number of wells may not be sufficient to adequately monitor changes in the lateral and vertical hydraulic gradients and contaminant concentrations to evaluate plume capture. The Board recommends that the decision documents incorporate adequate flexibility to allow refinement of the number, location, and depth of monitoring wells during design and thereafter as needed.

Response to Comment No. 6: Appropriate language has been included in the ROD to allow flexibility in design of the performance monitoring system. Evaluation of the performance monitoring system will be an important component of the annual operation and maintenance reporting for the ground water remedy.

NRRB Comment No. 7: Three disposal options are being considered for the treated ground water: reinjection into the aquifer, delivery to the city water system, and delivery to an ethanol plant. The Board encourages the Region to continue the evaluation of beneficial uses for the treated ground water, including impacts on operation and maintenance and cost offsets (e.g., potential metals treatment by the ethanol plant or potential reduction credits from providing treated water to the city water system.)

Response to Comment No. 7: All three disposal options are included as possible options in the ROD. For cost estimating purposes, the re-injection option for disposal of the treated ground water has been included in the Selected Remedy section of the ROD. The reinjection option will provide the most short-term benefit in terms of aquifer flushing and preventing decline of the water table during pump and treat operations. Evaluation of the cost offsets for the three disposal options can be included as part of the annual operation and maintenance reporting for the ground water remedy.